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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO.             | CONFIRMATION NO.            |
|--|-------------|-----------------------|---------------------------------|-----------------------------|
| 10/678,280   | 10/03/2003  | Raghunath Balakrishna | 1014-069US01/JNP-0311           | 3481                        |
| 72689  | 7590        | 10/21/2008            |                                 |                             |
| SHUMAKER & SIEFFERT, P.A<br>1625 RADIO DRIVE , SUITE 300<br>WOODBURY, MN 55125 |             |                       | EXAMINER<br>CLOUD, JOIYA M      |                             |
|  |             |                       | ART UNIT<br>2444                | PAPER NUMBER                |
|  |             |                       | NOTIFICATION DATE<br>10/21/2008 | DELIVERY MODE<br>ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pairedocketing@ssiplaw.com

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/678,280 | <b>Applicant(s)</b><br>BALAKRISHNA ET AL. |  |
|                              | <b>Examiner</b><br>Joiya M. Cloud    | <b>Art Unit</b><br>2441                   |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/03/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***DETAILED ACTION***

This action is responsive to the communication filed on 08/04/2008.

Claims 1-55 are PENDING. Applicant's arguments have been carefully considered but are moot in view of new ground(s) of rejections. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/04/2008 has been entered.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1- 59** are rejected under 35 U.S.C. 102(e) as being anticipated by Ho et al (US Patent No. 6,910,148).

**As per claim 1**, Ho teaches a method comprising managing state information within a primary control unit included within a device, wherein the state information

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comprises information representing a current state of a consumer included within the device (**col. 4, lines 48-51, col. 8, lines 20-27**); receiving with the primary control unit (**where the active controller system is the primary control unit**) a change to the state information (**the active controller system receives a state change, col. 4, lines 48-51**); prior to communicating the change to the consumer of the state information included within the device, communicating to a standby control unit included within the device the change performed by the primary control unit to the state information to synchronization the state information between the primary and standby control units (**where the state change is replicated to the standby controller system, col. 4, lines 48-51, col. 8, lines 20-27**); and after synchronizing the state information between the primary and standby control units, communicating, with the primary control unit, the change to the consumer to update consumer state information maintained within the consumer. (**col. 20, lines 40-65**)

As per claim 2, Ho teaches wherein communicating change to the state information to the standby control unit comprises communicating the change to the state information in accordance with an order that requires the change to be communicated to the standby control unit prior to communicating the change to the consumer of the state information (**col. 4, lines 48-51, col. 8, lines 20-27**).

As per claim 3, Ho teaches wherein managing state information comprises managing state information within a temporally-ordered data structure (**routing tables**), and wherein communicating the change to the standby control unit comprises replicating the temporally-ordered data structure within the standby control unit (**col. 4, lines 48-51 and col. 8, lines 22-27**).

**As per claim 4**, Ho teaches wherein communicating the change to the consumer comprises communicating the change to the state information to the consumer in accordance with the data structure (**col. 20, lines 45-48**).

**As per claim 5**, Ho teaches wherein managing the state information comprises utilizing a commit proposal and a commit marker to identify a portion of the state information (**col. 11, lines 11-49**).

**As per claim 6**, Ho teaches wherein utilizing the commit proposal and the commit marker comprises: setting the commit proposal to identify a most recent object of the temporally-ordered data structure that has been communicated to the consumer (**col. 12, lines 1-5**); and setting the commit marker to identify a most recent object of the temporally-ordered data structure that has been communicated to the consumer and for which an acknowledgement has been received from the consumer (**col. 12, lines 34-38**).

**As per claim 7**, Ho teaches further comprising setting a flag that indicates to the consumer that the commit proposal has been set (**col. 12, lines 1-5**).

**As per claim 8**, Ho teaches further comprising resetting the commit marker to the object identified by the commit proposal in response to receiving the acknowledgement (**col. 11, lines 11-49**).

**As per claim 9**, Ho teaches further comprising:  
replicating the commit proposal and the commit marker to the standby control unit; and  
communicating a portion of the replicated temporally-ordered data structure that is bounded by the replicated commit proposal and the replicated commit marker to the consumer from the standby control unit in the event the primary control unit fails (**col. 11, lines 11-49**).

**As per claim 10**, Ho teaches, further comprising issuing a communication from the primary control unit to cause the standby control unit to set the replicated commit proposal to identify a most recent object of the replicated temporally-ordered data structure that has not been acknowledged by the consumer (**col. 11, lines 11-49**).

**As per claim 11**, Ho teaches issuing another a communication from the primary control unit to cause the standby control unit to set the replicated commit marker to identify a most recent object of the replicated temporally-ordered data structure that has been communicated to the consumer and for which an acknowledgement has been received from the consumer (**col. 11, lines 50-col. 12, lines 1-5**).

**As per claim 12**, Ho teaches wherein issuing the other communication to cause the standby control unit to set the replicated commit marker further causes the standby control unit to set the replicated commit marker to the object identified by the replicated commit proposal in response to receiving the acknowledgement (**col. 11, lines 50-col. 12, lines 1-5**).

**As per claim 13**, Ho teaches wherein utilizing the commit marker and the commit proposal further comprises deleting a least recent object of the temporally-ordered data structure that is not bounded by the commit marker and the commit proposal (**col. 9, lines 25-30**).

**As per claim 14**, Ho teaches wherein managing the state information comprises storing the state information within a set of objects (**col. 23, lines 56-65**).

**As per claim 15**, Ho teaches wherein the change comprises on of the plurality of changes, wherein receiving the changes comprises receiving event messages indicating changes to the state information and the method further comprising linking the objects of

the data structure in accordance with an order in which the event messages are received to from a temporally-ordered data structure (**col. 29, lines 9-29**).

**As per claim 16**, Ho teaches maintain, with a primary control unit of a device, state information within a temporally-ordered data structure, wherein the state information comprises information representing a current state of a consumer included within the device (**col. 4, lines 48-51, col. 8, lines 20-27**); communicating a portion of the state information that corresponds to a change in the state information to the consumer included within the device so as to update consumer state information maintained by the consumer with the change; and encoding a commit proposal and a commit marker within the temporally-ordered data structure to identify the portion of the state information communicated to the consumer (**col. 11, lines 11-49**).

**As per claim 17**, Ho teaches wherein the data structure comprises a plurality of objects, and wherein maintaining state information comprises storing the state information within the objects (**col. 23, lines 56-65**).

**As per claims 18 and 19**, claims 18 and 19 are substantially the same as 6 and 7 and thus are rejected using similar rationale.

**As per claim 20**, Ho teaches receiving an update request from the consumer; identifying a second portion of the temporally-ordered data structure that contains objects more recent than the object identified by the commit proposal (**col. 11, lines 11-49**); and communicating state data associated with the second portion of the temporally-ordered data structure to the consumer in response to the request (**col. 11, lines 11-49**).

**As per claim 21**, Ho teaches further comprising updating the commit proposal to identify the most recent of the identified objects of the temporally-ordered data structure **(col. 11, lines 50-62)**.

**As per claim 22**, Ho teaches receiving an acknowledgement from the consumer **(col. 11, lines 50-62)**; and updating the commit marker to identify the object identified by the commit proposal in response to the acknowledgement **(col. 11, lines 50-62)**.

**As per claim 23**, Ho teaches further comprising communicating the change to the state information to a standby control unit included within the device before communicating the change to the consumer **(col. 4, lines 48-51, col. 8, lines 20-27)**.

**As per claim 24**, Ho teaches wherein communicating the change to the state information to the standby control unit comprises communicating the change to the state information in accordance with an order that requires the changes to be communicated to the standby control unit prior to communicating the change to the consumer **(col. 4, lines 48-51, col. 8, lines 20-27)**.

**As per claim 25**, Ho teaches wherein the change comprises one change of a plurality of changes, the method further comprising receiving event messages indicating the changes to the state information; and linking the objects of the data structure in accordance with an order in which the event messages are received **(col. 4, lines 48-51, col. 8, lines 20-27)**.

**As per claims 26-41**, claims 26-41 list substantially the same elements as claims 1-25 but in device form rather than method form. Therefore, the rejection to claims 1-25 applies equally as well to claim 26-41.



**As per claim 42**, Ho teaches a consumer; a memory to store state information; and a control unit to maintain the state information within a temporally-ordered data structure, wherein the control unit communicates a portion of the state information that corresponds to a change in the state information to the consumer so as to update consumer state information maintained by the consumer with the change, and encodes a commit proposal and a commit marker within the data structure to identify the portion of the state information within the temporally-ordered data structure, and wherein the state information comprises information representing a current state the consumer included within the device(**col. 4, lines 48-51, col. 8, lines 20-27**).

**As per claims 43-50**, claims 43-50 are list all the same elements as claims 1-25 and thus are rejected using similar rationale.

**As per claims 51-55**, claims 53-55 list all of the same elements of claims 1-13 but in computer readable medium form and thus are rejected using the same rationale as used in rejected the method of claims 1-13.

As per claim 56-59, Ho teaches wherein the device comprises a router and wherein the consumer comprises a forwarding component (**Figure 17 and col. 1, lines 33-42**).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joiya Cloud whose telephone number is 571-270-

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1146. The examiner can normally be reached Monday to Friday from on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3922.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*JMC*

**/William C. Vaughn, Jr./**  
**Supervisory Patent Examiner, Art Unit 2444**  
**2008**

**October 10,**